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State Response Plan

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This work was performed under the auspices of the U.S. Department of Energy by University of California, Lawrence Livermore National Laboratory under Contract W-7405-Eng-48.

Three months ago you were contacted and requested to participate in a DHS funded project at Lawrence Livermore National Laboratory that was focused on identifying personnel needs during a potential FMD outbreak response. Thank you for the time you took to respond to our questions and for your willingness to share your response plans. We had a wonderful response rate - 90% - and we hope that the information we've generated will be helpful to you.

The attached spreadsheet is a consolidation of the estimated personnel needs required by task during a FMD response. We have attempted to identify the number and type of personnel that would be needed in addition to the number of hours that they would be needed for each facility type. The estimates represent the ideal number of people desired for each task if resources were unlimited.

Also attached is a document detailing our process, assumptions and instructions on how the chart can be customized by an individual state with more detailed information.

We are continuing to assemble the resource estimates for those personnel resources which are related to uninfected premises within the Buffer Surveillance Zone (BSZ), for activities such as for surveillance, vaccination or movement control.

We welcome any feedback you have on these numbers. We will be looking for five states to work with in greater detail over the upcoming year. We would like to work with those states to model a FMD outbreak in that state and provide the personnel resource estimates which would be desired to address the outbreak. Those results can then be compared to the states actual available resources. If you are interested in continuing to work with us in this effort in the upcoming year please let us know. The five states we work with will be chosen on a first come basis. This document was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor the University of California nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or the University of California. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or the University of California, and shall not be used for advertising or product endorsement purposes.

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Again thank you for your willingness to participate in this project.

All the best,

Pam Hullinger

Resource Estimates per IP		Dairy				Feedlot	
Average # of Animals		1126	281	89	4	3686	64
		Large	Medium	Small	Backyard	Large	Small
Diagnosis							
	DVM	1	1	1	1	1	1
	AHT	1	1	1	1	1	1
	Skilled LI	0	0	0	0	0	0
	Unskilled LI	0	0	0	0	0	0
	Hours per Task per Team	8	4	4	4	8	4
Field Epidemiology							
	DVM	1	1	1	1	1	1
	AHT	3	2	1	1	2	1
	Skilled LI	0	0	0	0	0	0
	Unskilled LI	0	0	0	0	0	0
	Hours per Task per Team	8	8	4	4	8	4
Tracing- Direct Contacts							
	DVM	1	1	1	1	1	1
	AHT	1	1	1	1	1	1
	Skilled LI	0	0	0	0	0	0
	Unskilled LI	0	0	0	0	0	0
	Contacts Forward per Day	0.54	0.54	0.27	0.05	0.003	0.001
	Contacts Back per Day	0.08	0.08	0.05	0.05	0.74	0.08
	Number of Traces	6.51	6.51	3.36	1.05	7.8015	0.8505
	Hours per Trace	8	4	4	4	8	4
	Hours per Premise	52	26	13	4	62	3
Tracing- High Risk Indirect Contacts							
	DVM	1	1	1	1	1	1
	AHT	0	0	0	0	0	0
	Skilled LI	0	0	0	0	0	0
	Unskilled LI	0	0	0	0	0	0
	Contacts Forward per Day	0.92	0.92	0.42	0.01	0.09	0.01
	Contacts Back per Day	0.92	0.92	0.42	0.01	0.09	0.01
	Number of Traces	19.32	19.32	8.82	0.21	1.89	0.21
	Hours per Trace	4	4	2	2	4	2
	Hours per Premise	77	77	18	2	8	2
Appraisal							
	DVM	0	0	0	0	0	0
	AHT	1	1	1	1	1	1
	Skilled LI	1	1	1	1	1	1
	Unskilled LI	1	1	1	1	1	1
	Hours per Task per Team	16	8	4	2	4	2
Euthanasia							
	DVM	2	1	1	1	7	1
	AHT	10	5	5	1	35	5
	Skilled LI	8	4	4	2	28	4
	Unskilled LI	0	0	0	0	0	0
	Hours per Task	56	14	4	1	185	3
	Hours per Team	28	14	4	1	26	3
Disposal							
	DVM	0	0	0	0	0	0
	AHT	0	0	0	0	0	0
	Skilled LI	1	1	1	1	1	1

	Unskilled LI	12	6	6	2	42	6
	Hours per Task	375	94	30	1	1229	21
	Hours per Team	29	13	4	1	29	3
Cleaning and Disinfection							
	DVM	0	0	0	0	0	0
	AHT	0	0	0	0	0	0
	Skilled LI	2	1	1	1	4	1
	Unskilled LI	18	9	9	4	32	5
	Hours per Task per Team	64	40	40	16	56	40
Biosecurity							
	DVM	0	0	0	0	0	0
	AHT	0	0	0	0	0	0
	Skilled LI	1	1	1	1	1	1
	Unskilled LI	2	2	2	2	2	2
	Hours per Task per Team	137	75	52	20	115	48

Cow/Calf		Stocker		Dcalf/Heifer	Beef	Swine (Farrow-Finish)		
821	64	763	81	739	8	6618	165	
Large	Small	Large	Small		Backyard	Large	Small	
1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
8	4	8	4	8	8	4	8	4
1	1	1	1	1	1	1	1	1
2	1	2	1	2	2	1	2	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
8	4	8	4	8	8	4	8	4
1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0.06	0.02	0.06	0.02	0.74	0.05	0.66	0.15	
0.14	0.01	0.14	0.01	0.56	0.05	0.74	0.01	
2.1	0.315	2.1	0.315	13.65	1.05	14.7	1.68	
8	4	8	4	8	4	8	4	
17	1	17	1	109	4	118	7	
1	1	1	1	1	1	1	1	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
0.09	0.01	0.09	0.01	0.37	0.01	0.09	0.01	
0.09	0.01	0.09	0.01	0.37	0.01	0.09	0.01	
1.89	0.21	1.89	0.21	7.77	0.21	1.89	0.21	
4	2	4	2	4	2	4	2	
8	2	8	2	31	2	8	2	
0	0	0	0	0	0	0	0	
1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	
1	1	1	1	1	1	1	1	
4	2	4	2	12	2	8	4	
2	1	2	1	1	1	7	1	
10	5	10	5	5	1	14	2	
8	4	8	4	4	2	49	7	
0	0	0	0	0	0	0	0	
41	3	38	4	37	1	53	3	
21	3	19	4	37	1	8	3	
0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	
1	1	1	1	1	1	1	1	

12	6	12	6	6	2	42	6
274	21	254	27	246	3	1103	28
21	3	20	4	35	1	26	4
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	1	1	1	1	4	1
9	5	9	5	9	4	32	5
24	16	24	16	56	16	40	24
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
70	24	67	26	140	20	82	35

Swine (Finish)		Swine (Farrow-Feeder)		Swine (Nursery)		Swine (Farrow-Wean)	
5219	165	5202	165	3379	132	5213	165
Large	Small	Large	Small	Large	Small	Large	Small
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
8	4	8	4	8	4	8	4
1	1	1	1	1	1	1	1
2	1	2	1	2	1	2	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
8	4	8	4	8	4	8	4
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0.02	0.02	0.66	0.15	0.66	0.15	0.66	0.15
0.74	0.08	0.74	0.01	0.74	0.01	0.74	0.01
7.98	1.05	14.7	1.68	14.7	1.68	14.7	1.68
8	4	8	4	8	4	8	4
64	4	118	7	118	7	118	7
1	1	1	1	1	1	1	1
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0.09	0.01	0.09	0.01	0.09	0.01	0.09	0.01
0.09	0.01	0.09	0.01	0.09	0.01	0.09	0.01
1.89	0.21	1.89	0.21	1.89	0.21	1.89	0.21
4	2	4	2	4	2	4	2
8	2	8	2	8	2	8	2
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1
4	2	4	2	4	2	8	2
5	1	5	1	3	1	5	1
10	2	10	2	6	2	10	2
35	7	35	7	21	7	35	7
0	0	0	0	0	0	0	0
42	3	42	3	27	3	42	3
8	3	8	3	9	3	8	3
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1

30	6	30	6	18	6	30	6
870	28	867	28	563	22	869	28
28	4	28	4	30	3	28	4
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
3	1	3	1	2	1	3	1
23	5	23	5	14	5	23	5
40	24	40	24	40	24	40	24
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2
80	33	80	33	83	32	84	33

Backyard Swine	Sheep		Goats		
7	1919	88	9	25	9
	Large	Small	Backyard	General	Backyard
1	1	1	1	1	1
1	1	1	1	1	1
0	0	0	0	0	0
0	0	0	0	0	0
4	8	4	4	4	4
1	1	1	1	1	1
1	2	1	1	1	1
0	0	0	0	0	0
0	0	0	0	0	0
4	8	4	4	4	4
1	1	1	1	1	1
1	1	1	1	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0.05	0.26	0.21	0.05	0.26	0.05
0.05	0.06	0.01	0.05	0.06	0.05
1.05	3.36	2.31	1.05	3.36	1.05
4	8	4	4	4	4
4	27	9	4	13	4
1	1	1	1	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0.01	0.01	0.01	0.01	0.01	0.01
0.01	0.01	0.01	0.01	0.01	0.01
0.21	0.21	0.21	0.21	0.21	0.21
2	4	2	2	2	2
2	4	2	2	2	2
0	0	0	0	0	0
1	1	1	1	1	1
1	1	1	1	1	1
1	1	1	1	1	1
2	8	2	2	2	2
1	4	1	1	1	1
1	20	5	1	1	1
2	16	4	2	2	2
0	0	0	0	0	0
3	48	2	2	2	2
3	12	2	2	2	2
0	0	0	0	0	0
0	0	0	0	0	0
1	1	1	1	1	1

2	12	3	2	2	2
1	320	15	2	4	2
1	25	4	1	1	1
0	0	0	0	0	0
0	0	0	0	0	0
1	1	1	1	1	1
4	9	9	4	4	4
8	24	16	16	16	16
0	0	0	0	0	0
0	0	0	0	0	0
1	1	1	1	1	1
2	2	2	2	2	2
14	69	24	21	21	21